



RESEARCH ARTICLE

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GESTATIONAL SYPHILIS: EPIDEMIOLOGICAL PROFILE IN BELÉM OF PARÁ FROM 2014 TO 2018

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ABSTRACT

The Health Ministry highlights in Brazil around 50 thousands parturient are diagnosed with gestational syphilis, according these numbers, 12 thousands babies who lives births present congenital syphilis, therefore, it is important to have an appropriate prenatal with syphilis pregnant woman, because the probability is 40% percent to the pregnantunborn child who has diagnosed with syphilis and does not do any treatment stillborn or to develop some congenital issues, even the diagnoses are early or late. Consequently, this search aims to recognize the disease epidemiological profile in parturient that lives in Belém. The data were collected at SINAN/DATASUS at Belém zone, the capital city of Pará. The notifications were 1.504 syphilis pregnant cases and 840 congenital syphilis' diagnose per year. It was identified the profile of 730 women who has gestational syphilis, the most of that wereage group 20 and 39 years old 68,5%, according to this percentage, 80,1% were brown skinned, 23,1% just have the incomplete elementary school or 32,7% have the high school and were considered 20,8% primary syphilis cases. We note the necessity of beginning prevent measure and actions to seek precocity with the pregnant to make the prenatal and mainly with those who has syphilis clinical evidence, to implement interventions to control this grievance.

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INTRODUCTION

Syphilis is a chronicle systemic infection, sexually transmitted, caused for the *Treponema pallidum* bacteria, presented in several clinical manifestations and different stages, the syphilis can be transmitted by intercourse without condom between partners who has bodily injury (gained), to the fern during the pregnancy or childbirth moment¹. The Health Ministry highlights in Brazil around 50 thousands parturient are diagnosed with gestational syphilis, according these numbers, 12 thousands babies who lives births present congenital

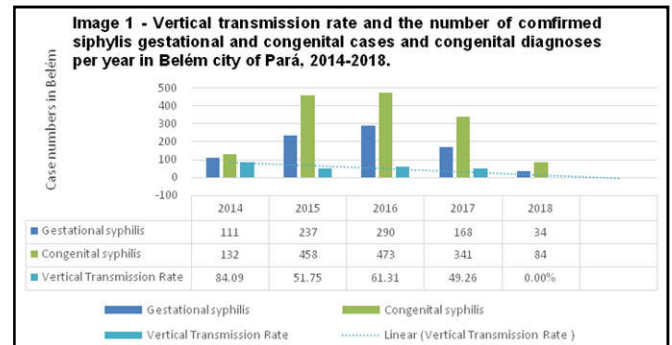
syphilis, therefore, it is important to have an appropriate prenatal with syphilis pregnant woman, because the probability is 40% percent to the pregnantunborn child who has diagnosed with syphilis and does not do any treatment stillborn or to develop some congenital issues, even the diagnoses are early or late^{2,3}. The congenital syphilis is an infection in the fern, the transmission happens in outworking treponema crossing the placenta, being more dangerous when the pregnant woman is in the first trimester pregnancy, becoming one of the main miscarriage cases according to the a Health Worldwide Organization⁴. On gestational period, the syphilis cases more than 30.000 fetal deaths and neonatal per year in all the world,

according this, increase the early mortality risk in 215.000 children, on the last decade, in Brazil, observed the increase notification of syphilis cases in pregnant woman and congenital syphilis⁵. On north region is enroll around 6,1 total cases, average 4,2 thousands cases per year⁶. Therefore the infection is consisted according to three symptomatic stages, this, (primary, secondary and tertiary) asymptomatic latent, remembering to the emphasis that the main frequency transmissions of infection occurs on primary and secondary stages⁷. On account of this notification cases numbers, this infection deserves to have a special care between the pregnant women due to the transmission possibility to the fern, creating important clinical impacts as much as during the gestational pregnancy or after the date of birth¹. Thus, we note the early detection importance and the notification, it can contribute to the effective syphilis control which has the fundamental proposition the serological triage and the expectant mothers and partners appropriate sexual treatment, in the view of, the quality prenatal assistance and during the childbirth in an important to reduce the vertical transmission⁸. In addition, this search aims to describe the epidemiological profile in syphilis notified cases of syphilis in pregnant woman and congenital syphilis from 2014 to 2018 in Belém city of Pará.

MATERIALS AND METHODS

SINAN/DATASUS mean an descriptive study, retrospective with quantitative approach about congenital and gestational syphilis the data were collected on DATASUS which provide information to the measurement of the population's health condition, between several sections stand the Sistema de Informação de Agravos de Notificação (SINAN/DATASUS)¹⁰,¹¹, this registration are updated according to the compulsory notification sheets what is fill in by health professional. The study's local was at Belém capital of Pará region, the data survey was included the congenital and gestational syphilis cases who resides in the Belém capital which were registered on SINAN from 2014 to 2018, according to the guidelines requirements which follow the confirmed definitions cases in agreement to the Health Ministry¹². There were excluded the pontificated cases in the ages before 2014, which are not in the database or incomplete register. The studies variety in agreement with the notification sheets were; maternal sociodemographic - age (10 a 14, 15 a 19, 20 a 39 e 40 a 59), racial (ignored, white, black, yellow, brown skin, indigenous), schooling (illiterate from 1st and 4th incomplete Elementary School, on 4th Elementary School, from 5th to 8th incomplete Elementary School, complete Elementary School, incomplete High School, complete High School, incomplete College, complete College and ignored) – Prenatal fulfillment (yes, no, ignored and blank field). On the data analyses were calculated according to the syphilis vertical transmission rate, utilizing the detected syphilis case numbers in pregnant woman, in a determined diagnostic year and local residences per year, divided by the numbers of contingencies syphilis cases detected, in a determined year the diagnoses and local residence multiplied for 100. To the congenital and gestational syphilis diagnosed cases per year obtained from SINAN, which were data transcript to the column graphics program on Microsoft Word – Excel. After get together the information about the congenital and gestational syphilis, it was organized all the data in a tabular representation to show the set of found data on Information System and to obtain a broad vision about what intend analyze.

Outcomes: From 2014 to 2018, there were identified in Belém 1.504 pregnancy women cases tiwh syphilis and 840 congenital syphilis cases diagnosed per year, and 2016 there were several numbers of infections pontificated, mainly congenital syphilis in minor of age, and analyzing the vertical transmission rate highlight in 2014 the percentage of 84,09% syphilis transmissibility and in 2018 a graphic linear line was decreasing (image 1). The pregnant women profile were 730 who have syphilis gestational and the most of that were around 20 and 39 years old 68,5%, and more than 80,1% were brown skinned pregnancy women, 23,1% had incomplete Elementary School or 32,7% had complete High School and they were considered 20,8% primary syphilis cases (Table 1).



Source: Ministério da Saúde/SVS - Sistema de Informação de Agravos de Notificação - Sinan Net

Table 1. Distribution according to the gestational syphilis in pregnancy women in sociodemograph variables notified in SINAN¹ in Belém of Pará City, from 2014-2018

VARIABLES	n	%
Age group (in years)		
10-14	16	1,5
15-19	312	29,3
20-39	730	68,5
40-59	8	0,7
Racial / Skin color		
White	82	7,7
Black	41	3,8
Yellow	7	0,7
Skinned Brown	854	80,1
Indigenous	2	0,2
Ignored / Blank	80	7,5
Schooling		
Illiterate	2	0,2
Incomplete Elementary School	246	23,1
Complete Elementary School	118	13,9
Incomplete High School	148	1,0
Complete High School	185	32,7
Incomplete College	11	11,0
Complete College	8	17,4
Ignored / Blank	348	0,7
Clinical disease Classification		
Primary	314	20,8
Secondary	46	3,1
Tertiary	247	16,4
Latent	17	1,2
Ignored / Blank	880	58,5
Treponemal test (fast test or FTA-Abs ² test)		
Reactive	379	25,2
Non-reactive	23	1,6
Unrealized	800	53,2
Ignored / Blank	302	20,0
Non-treponemaltest (VDRL ³)		
Reactive	1.352	89,9
Non-reactive	11	0,8
Unrealized	15	1,0
Ignored / Blank	126	8,3

¹Sinan: Sistema de Informação de Agravos de Notificação

²FTA-Abs: teste de absorção de anticorpos treponêmico fluorescente

³VDRL: venereal disease research laboratory

In 1.504 non-treponemal test (VDRL), 89,9% obtained reagent result, remarkably, this test detect antibodies unspecific against *Treponema Pallidum* (Table 1). But those which detect the *T. Pallidum* specific antibodies identified 25,2% reagent treponemal test (fluorescent treponemal antibodies observed test –[FTA-Abs]), and 53,2% serological test unrealized (Table 1). From 2014 to 2018, the congenital syphilis cases in age group of one year, exceed during the years being notified and confirmed in SINAN, from 504 cases were related to the age group of kids are 6 days life-affirming (Table 2).

Tabela 2. Sociodemograph features according to congenital syphilis mothers with live births, notified in SINAN¹ in Belém of Pará city, 2014-2018

VARIABLES	n	%
Prenatal realized		
Yes	365	68,8
No	146	27,4
Ignored / Blank	20	3,8
Partner treatment		
Yes	59	11,1
No	315	59,3
Ignored / Blank	157	29,6
Age group (in years)		
10-14	9	1,6
15-19	160	30,1
20-39	347	65,4
40-59	7	1,4
Ignored / Blank	8	1,5
Racial / Skin color		
White	20	3,9
Black	8	1,5
Yellow	1	0,1
Skinned brown	358	67,4
Indigenous	0	—
Ignored / Blank	144	27,1
Schooling		
Illiterate	0	—
Incomplete Elementary School	98	18,6
Complete Elementary School	74	11,0
Incomplete High School	58	0,7
Complete High School	71	14,0
Incomplete College	4	13,5
Complete College	2	0,3
Ignored / Blank	222	42,2
Maternal treatment		
Appropriate	6	1,1
Inappropriate	291	55,9
Unrealized	158	30,3
Ignored / Blank	66	12,7
Maternal Syphilis Diagnosed		
During pre natal	141	26,5
Childbirth moment / curettage	261	49,1
After childbirth	99	18,7
Unrealized	0	—
Childbirth	30	5,7
Final Classification		
Recent congenital syphilis	418	78,8
Later congenital syphilis	1	0,1
Stillbirth / miscarriage for syphilis	60	11,3
Discarded	52	9,8
Case according to the children's age		
Untill 6 days of born	504	95,0
From 7 to 27 days of born	22	4,2
From 28 day to 1 year	4	0,7
From 1 year to 23 months	—	—
From 2 to 4 years	1	0,1
From 5 to 12 years	—	—
Case evaluation		
Alive	362	86,4
Death for congenital syphilis	11	2,7
Death for another case	6	1,4
Ignored / Blank	40	9,5

¹Sinan: Sistema de Informação de Agravos de Notificação

Between the cases mothers who filled in the definition criteria to congenital syphilis 67,4% predominated skinned brown

women, 65,4% in age group from 20 to 39 years old, however, 30,1% were between 15 and 19 years old and 18,6% had incomplete Elementary School (Table 2). In total, congenital syphilis cases, 365 mothers realized the prenatal during the pregnancy, 315 didn't have their partners in treatment, from 291 congenital syphilis mother cases notified received inappropriate treatment, according to the appropriate treatment realized during the pregnancy over this period maintain low in 6 cases and 261 were diagnosed during the childbirth or curettage (Table 2). Analyzing the final classification obtained: 418 recent congenital syphilis notifications, 60 cases were stillborn children or miscarriage for identified syphilis on information system, however, according to the evaluation cases observed: 362 cases are still alive and 11 obtained death for congenital syphilis (Table 2).

DISCUSSION

We noted the syphilis pregnancy increasing during the recent years and the notification increasing of congenital syphilis diagnoses per year in Belém city, however, in 2018, there was a decline number of notified cases, because the SINAN platform were in updating, it was lower in relation to other periods. In other searches the authors emphasize the same weakness related to the updating data in the information system, because this difficult comes to be one of the obstacles related to the syphilis pregnancy^{13, 6}. Notice, the case numbers which were notified in the information system does not benefit with other realized searches in this region. Since as, in this search, we identified the female genre between the age group from 20 to 39 present infection, and the predominance was in the skinned brown, incomplete schooling and primary clinical classification. However, in other search in Almirante Tamandaré city were observed that women with the same age tend to be more vulnerable to have the infection risk, on the way that sexual experience without condom⁷. Notice the VDRL tests in the prenatal presented reagent serology and on FTA-Abs monitoring the most of that does not realized it, and the last exam confirm the diagnose. These data are such as the realized search on South of Brazil in 2018, and the emphases is about the importance of all the pregnancy women doing the test in the first prenatal appointment on the first pregnancy trimester, according to the period around the 28 pregnancy weeks is necessary repeat the serology, to have the appropriate treatment¹⁴. On the other hand, there were detected a high number related to the partner treatment absence, in general the women realized the prenatal and received the inappropriate treatment, and the others who were diagnosed with syphilis in the childbirth moment or curettage (in miscarriage cases), then noticed the weakness to identify the diagnose. To compare to other searches, we notice the appropriate prenatal assistance importance with the syphilis early diagnose in pregnancy women and highlight the consequences of inappropriate treatment, it will reflect to the children's morbimortality^{15, 16}.

In addition, the prenatal assistance talks about the early qualification to the pregnancy women through the health action and exam realized during the pregnancy to promote the prevent it, and it is the critical importance to avoid bodily harm in the baby¹⁴. Moreover, the sexual partner untreated is a big issue which could impact in the pregnancy appropriate treatment care, other searches emphasizes about this topic is getting repeated and there is a necessity to solve the issue¹⁷. The congenital syphilis predominance is on the first week of birth, and we need to emphases the analyze about the cases evaluation and final classification which were identified a

recent congenital syphilis notification increase (In children diagnosed until 2 years of birth) and also about the miscarriage for syphilis or stillbirth children. By the way, Lima and collaborators (2018) endorses to the recent search, which demonstrate a classification predominance in the recent congenital form, so the newborn children from untreated or inappropriate syphilis mothers tend to have alive, stillborn or miscarriage children¹⁴.

Conclusion

The epidemiological profile knowledge about this infection may contribute to optimize the vertical transmission interventions health actions, however to it be possible it is necessary keeping the operationalization flow always being updating with new notification data. But the limited registers absence make it difficult to identify real recent situation, what we can consider such as a limitation in this search presented by shortage in new investigations cases in information system.

Although there were a big qualitative divergence in notified cases between 2017 and 2018 years the variables distribution and their sociodemograph characteristics present that is it possible to put in practice the action strategy as well as offer to every pregnancy women an appropriate prenatal assistance.

The found results in this search notice the necessity to start actions to measure in a early way this pregnancy women to do the prenatal e mainly to who has the syphilis clinical evidence, to implement interventions to control this issue, because the group must give an appropriate assistance realizing at least six appointments, request the VDRL test in the first pregnancy trimester, in cases the results be reagent fill in the notification sheet and begin the appropriate pregnancy and pattern treatment. However, reaffirm the necessity of a assistance during the prenatal with qualified, effective and appropriate professionals, since were evidenced that the notification system was outdated because the information system data didn't express the disease current reality in Belém city, we hope to be realized a better profile monitoring and description to guide the confront strategies.

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